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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/624,532	07/23/2003	Woo-Young Jang	249/394	6657
27849	7590	11/02/2005	EXAMINER	
LEE & MORSE, P.C. 1101 WILSON BOULEVARD SUITE 2000 ARLINGTON, VA 22209			APANIUS, MICHAEL	
			ART UNIT	PAPER NUMBER
			3736	

DATE MAILED: 11/02/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/624,532		Applicant(s) JANG ET AL.	
	Examiner Michael Apanius		Art Unit 3736	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☐ Responsive to communication(s) filed on 28 September 2005.

2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) 1-17, 19, 24, 28-45, 50, 51 and 53-67 is/are pending in the application.

4a) Of the above claim(s) 2, 7, 9, 11, 16, 28-45, 50, 51 and 61-67 is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) 1, 3-6, 8, 10, 15, 17, 19, 24 and 53-60 is/are rejected.

7) ☒ Claim(s) 12-14 is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☒ The specification is objected to by the Examiner.

10) ☒ The drawing(s) filed on 23 July 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date 060704, 102204.

4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____

DETAILED ACTION

1. Acknowledgement is made of the addition of claims 53-67 and the cancellation of claims 18, 20-23, 25-27, 46-49 and 52.

Election/Restrictions

2. Applicant's election with traverse of Invention I in the reply filed on 28 September 2005 is acknowledged. The traversal is on the ground(s) that the claims have been amended so that all of the details presented in the independent subcombination claim 28 are also in the combination claim. This is not found persuasive because other details are recited in the dependant claims of independent subcombination claim 28 that are not required by the combination. For example, a thickness of about 0.8mm as set forth in claim 29 is not required by the combination.
3. The requirement is still deemed proper and is therefore made FINAL.
4. Claims 28-45, 50, 51 and 61-67 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected Invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 28 September 2005.
5. Applicant's election without traverse of Species II in the reply filed on 28 September 2005 is acknowledged.

6. Claims 2, 7, 9, 11, 16, 30, 35, 37, 50 and 51 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 28 September 2005.

7. Note that claims 16 and 51 are directed to a single electrode distance adjuster connected to all electrodes associated with the non-elected Species IV.

Drawings

8. The drawings are objected to because figures 1C, 1D, 2C, 2D, 3C, 3D and 4B are photographs that are not of sufficient quality to show the details of the invention.

9. The drawings are further objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the perpendicular distance adjusters set forth in claim 13 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

10. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for

consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

11. The disclosure is objected to because of the following informalities:
 - a. At the first line of each paragraph 14-17, "each of" should be deleted and "includes" should be --include--.
 - b. At paragraph 19, lines 9-10, "the second electrode distance adjuster includes" should be deleted.
 - c. At paragraph 26, line 3, --to-- should be inserted between "according" and "a".
 - d. At paragraph 29, line 1, --of-- should be inserted between "photograph" and "an".

Appropriate correction is required.

Claim Objections

12. Claims 19 and 53 are objected to because of the following informalities:

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- a. At claim 19, line 8, "(0)" should be deleted and at claim 19, line 9, "(DC)" should be deleted.
- b. At claim 19, line 15, --noise-filtered-- should be added between "the" and "potential".
- c. At claim 53, line 2, "measuring" should be --measurement--.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

13. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

14. Claim 8 and 24 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

15. At claim 8, line 2, "the third and fourth electrodes" lack antecedent basis.

16. At claim 24, line 3, "the potential difference" lacks antecedent basis. At claim 24, line 4, "the signal conversion unit" lacks antecedent basis.

Claim Rejections - 35 USC § 102

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

12. Claims 1, 4, 6, 8, 10 and 53-59 are rejected under 35 U.S.C. 102(b) as being anticipated by Hirschman (US Patent No. 6,408,204).

13. Regarding claim 1, Hirschman discloses an impedance measurement system for measuring skin impedance in a small skin region, comprising an electrode unit (figure 4) having current supply electrodes (52a and 52d) and measurement electrodes (54b and 54c), and a current source (column 6, lines 60-61).

14. Regarding claims 53-59, Hirschman discloses that opposing first and second measurement electrodes are located between opposing first and second current supply electrodes. Hirschman further discloses that the electrodes can have the same complimentary open two-dimensional shape (column 8, lines 34-37).

15. Regarding claims 4, 6, 8 and 10, the measurement electrodes are disposed perpendicular to the current supply electrodes.

16. Claims 1 and 60 are rejected under 35 U.S.C. 102(b) as being anticipated by Skladnev et al. (WO 00/19894).

17. Regarding claim 1, Skaldnev et al. discloses an impedance measurement system for measuring skin impedance in a small skin region, comprising an electrode unit (figure 4) having current supply electrodes (15) and measurement electrodes (13), and a current source (127 in figure 5).

18. Regarding claim 60, the system includes a signal processing unit (figure 5), which is connected to the electrodes, receives response signals, generates a potential difference signal, removes noise, and amplifies (page 14, line 13 - page 15, line 24).

19. Claims 1 and 15 rejected under 35 U.S.C. 102(b) as being anticipated by Fletcher et al. (US Patent No. 3,957,037).

20. Regarding claim 1, Fletcher et al. discloses an impedance measurement system for measuring skin impedance in a small skin region, comprising an electrode unit having current supply electrodes (the two left electrodes of figure 1) and measurement electrodes (the two right electrodes of figure 1), and a current source (12). Note that the electrodes are capable of being connected in an alternative manner than that shown in figure 1 such that the two left electrodes are connected to the current source and the two right electrodes are connected to the amplifier.

21. Regarding claim 15, the system has an electrode distance adjuster (figure 2) for adjusting the distance between the current supply electrodes.

22. Claims 1 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Gallup et al. (US Patent No. 5,372,141).

23. Regarding claim 1, Gallup et al discloses an impedance measurement system for measuring skin impedance in a small skin region, comprising an electrode unit (column 4, lines 7-22) having current supply electrodes and measurement electrodes, and a current source (44).

24. Regarding claim 24, the system has an image display unit including a data analyzer (34), a signal conversion unit (62), an operation controller (14), and a display unit (12 and 36).

Claim Rejections - 35 USC § 103

25. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

26. Claims 1, 3-6, 8, 10 and 53-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirschman (US Patent No. 6,408,204) in view of Hagen et al. (US Patent No. 5,114,424).

27. Hirschman meets the limitations of claims 1, 4, 6, 8, 10, 53-56 and 59 as stated above.

28. Regarding claims 3 and 5, although Hirschman discloses that the electrodes can have any suitable configuration (column 8, lines 34-37) he does not expressly disclose an angular shape.

29. Hagen et al. teaches alternative angular open two-dimensional electrodes which face one another (14 and 15 in figure 3) that can be used in impedance measurements (column 4, lines 42-43).

30. Therefore, it would have been obvious to one having ordinary skill in the art as the time of invention to have used the angular electrode shape taught by Hagen et al. as an alternative electrode shape in the system of Hirschman.

31. Claims 1 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Libke et al. (US Patent No. 4,895,163) in view of Dufresne et al. (US Patent No. 4,917,093).

32. Regarding claim 1, Libke et al. discloses an impedance measurement system for measuring skin impedance in a small skin region, comprising an electrode unit having current supply electrodes (12 and 16) and measurement electrodes (10 and 14), and a current source.

33. Regarding claim 17, the current source has an input unit (figure 5), an external power supply (9V battery in figure 5), a current converter (in figure 3), and an output unit (left side of figure 4).

34. Libke does not expressly disclose a current intensity controller.

35. Dufresne et al. teaches a current intensity controller that uses a variable resistor (column 7, lines 40-43, 132 in figure 4) for the purpose of improving battery life (column 2, lines 29-32).

36. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used a current intensity controller as taught by Dufresne et al. in the system of Libke et al. in order to improve battery life.

37. Claims 1, 19 and 60 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mee et al. (US Patent No. 4,578,635) in view of Skladnev et al. (WO 00/19894).

38. Mee et al. discloses an impedance measurement system having measurement electrodes (2), and a signal processing unit (column 7, line 47 - column 8, line 60)

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comprising a buffer (A1 in figure 2), a potential difference measurer (1), a combined offset voltage controller and amplifier (A2), and a phase inverter amplifier (A3).

39. Mee et al. does not expressly disclose current supply electrodes, a current source, or a filter.

40. Skaldnev et al. teaches current supply electrodes (13 in figure 4) connected to a current source (127 in figure 5) and a signal processing unit which includes a filter (137) for the purpose of allowing multiple measurements which complement each other to improve accuracy of tissue type recognition (page 4, lines 9-12).

41. Therefore, it would have been obvious to one having ordinary skill in the art at the time of invention to have used current supply electrodes, a current source and a filter as taught by Skladnev et al. in the system of Mee et al. in order to accurately recognize tissue types.

Allowable Subject Matter


42. Claims 12-14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

43. The following is a statement of reasons for the indication of allowable subject matter: no prior art of record teaches or suggests an electrode distance adjuster that has a screw mechanism as set forth in claims 12-14.

Conclusion

44. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US Patent No. 6,631,292 discloses a bio-electrical impedance analyzer.
45. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Apanius whose telephone number is (571) 272-5537. The examiner can normally be reached on Mon-Fri 8:30am-5pm.
46. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Max Hindenburg can be reached on (571) 272-4726. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
47. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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